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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,728	02/10/2004	Bret O. Baynham	2380.006	2819

21917 7590 04/13/2007

MCHALE & SLAVIN, P.A.
2855 PGA BLVD
PALM BEACH GARDENS, FL 33410

EXAMINER	
CUMBERLEDGE, JERRY L	
ART UNIT	PAPER NUMBER
3733	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/776,728	BAYNHAM ET AL.	
	Examiner	Art Unit	
	Jerry Cumberledge	3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 January 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-8 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Golds et al. (US Pat. 5,356,412).

Golds et al. disclose a surgical cable system comprising a surgical cable (top Fig. 11, below) with a permanent clamp (top Fig. 11, below) on one end and a free end (top Fig. 11, below), the permanent clamp having a cable bore (top Fig. 11, below) and a manually actuated (since the stop is responsive to the cable, which is pulled manually, column 6, lines 19-23) stop (top Fig. 11, below), the stop having a first position and a second position (column 7, lines 60-63), which permit advancement of said free end through a cable bore in either an advancement or retrograde direction (column 2, lines 50-60), and prevents motion in a retrograde motion (i.e. "securing position", column 2, lines 56-60). The cable system has a lateral bore (top Fig. 11, below) intersecting the cable bore and a mandrel (top Fig. 11, below) in the lateral bore. The stop effectively expands a portion of the mandrel since, as the stop engages the cable, the stop moves with the cable. As the stop moves with the cable, the mandrel, which is connected to the cable also moves. As the stop and the mandrel move, they

expand across the distance between the stop and the wall near ref. 92. The cable comprises a multifilament cable (column 3, lines 67-68 and column 4, line 1).

Golds et al. further disclose a provisional clamp comprising a bore (bottom Fig. 11, below) and a mechanism (bottom Fig. 11, below) capable of contacting the cable to permit advancement of the free end and to prevent retrograde movement thereof. The mechanism can be considered to be the walls of the clamp that are next to the bore. The walls of the clamp allow the cable to pass through when the cable proceeds through the middle of the bore and does not engage the walls. If the cable is moving in a retrograde direction, the walls of the clamp would be capable of stopping the retrograde motion through friction, if the walls and the cable come into contact with each other. The provisional clamp further comprises a slot (bottom Fig. 11, below) connected to the bore and a roller bearing in the slot (bottom Fig. 11, below), the roller bearing being spring biased. The roller bearing can be considered to be spring biased. A definition of spring, according to The American Heritage Dictionary of the English Language: Fourth Edition, is "a warping, bending, or cracking, as that caused by excessive force." The roller bearing can be considered to be spring biased, since the pins 92 (bottom Fig. 11, below) of the roller bearing warp the cable (column 7, lines 57-60).

The surgical cable system has a locked position and an unlocked position (column 2, lines 50-60).

The stop traverses along a substantially linear path to engage said cable for preventing motion thereof. The path of the stop, is not linear, but is substantially linear. The path that the stop takes from moving from a locked to an unlocked position is very small (Figs. 4 and 5) and approximates a line, and as such the motion is substantially linear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Golds et al. (US Pat. 5,356,412).

Golds et al. disclose the claimed invention, except for the cable being constructed out of 100 to 150 filaments and the system having two clamps, a provisional clamp and a permanent clamp.

With regard to claim 9, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the cable of Golds et al. with 100 to 150 filaments, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With regard to claims 10 and 11, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the surgical cable system of Golds et al. with two clamps, a provisional and a permanent, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. The provisional and the permanent clamps of the claimed invention can be considered to be two of the clamps of Golds et al., which can be used at the same time.

Claims 1-4 and 6-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Golds et al. (US Pat. 5,356,412) in view of Cohen (US Pub. 2002/0072753 A1).

Golds et al. disclose the claimed invention, except for a tensioner instrument comprising a shaft with a cable guide, a handle end, and a cable chuck, the chuck slidably mounted on the shaft, and a cable; a clutch mechanism connected to the cable chuck, the clutch mechanism moving in a reciprocating manner with the cable chuck; the surgical cable system comprising pivoting hand grips attached at the handle end to the cable chuck and the shaft and the clutch further comprising a passage intersected by a spring loaded clutch and the cable passing through the passage.

Cohen discloses a tensioner instrument comprising a shaft (Fig. 9 below) with a cable guide (Fig. 9 below), a handle end (Fig. 9 below), and a cable chuck (Fig. 9 below), the chuck slidably mounted on the shaft, and a cable ("E", Fig. 9

below). Cohen further discloses a clutch mechanism (Fig. 9 below) connected to the cable chuck, the clutch mechanism constructed and arranged to grasp said cable during rearward movement of said chuck and release said cable during forward motion of said chuck to allow said cable to pass freely through said chuck, and the clutch mechanism moves in a reciprocating manner with the cable chuck, since they are attached and can move in any way with each other. The clutch is constructed and arranged to engage said cable during a tensioning movement of said chuck and release said cable for free movement through said chuck during a non-tensioning movement of said chuck. Cohen further discloses the surgical cables system comprising pivoting hand grips (Fig. 2 below) attached at the handle end to the cable chuck and the shaft. The clutch further comprises a passage (Fig. 9 below) intersected by a spring loaded clutch (Fig. 9 below) (paragraph 0032, lines 15-17) and the cable passing through the passage. This device is used to tension wires during surgery (paragraph 0006, lines 9-10).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the surgical cable system of Golds et al. by adding the tensioner of Cohen, in order to tension the cable of the system (paragraph 0006, lines 9-10).

The surgical cable system of Golds et al. as modified by Cohen is capable of performing a method with steps of providing a surgical cable having a free end and a permanent clamp on the other end, looping the cable around skeletal bones, passing the free end through the permanent clamp, passing the free end through a provisional clamp, said provisional clamp constructed and arranged to

automatically permit passage of said cable in one direction, passing the free end through a manually operated tensioner, manipulating the tensioner to put tension on the cable and draw the free end through the permanent clamp and the provisional clamp, reducing the loop, operating a manually actuated stop in the permanent clamp when the bones are in a predetermined spatial relationship whereby the manually actuated stop fixes the size of the loop and the skeletal bones are fixed in the predetermined relationship; sequentially manipulating the tensioner to increase the tension on the cable by sequentially moving the tensioner along the cable toward the permanent clamp and re-applying tension on the cable to draw the free end through the permanent clamp and further reduce the loop; removing the tensioner from the cable prior to operating a manually actuated stop in said permament clamp, whereby the provisional clamp maintains the tension placed in the cable by the tensioner; actuating thethe manually actuated stop in the permanent clamp, manually releasing the tension on said cable maintained by the provisional clamp and removing the provisional clamp from the cable; removing the tensioner from the cable, manually releasing the tension in the provisional clamp and removing the provisional clamp from the cable.

With regard to statements of intended use and other functional statements (i.e. ...for accepting said free end of said cable..., ...permitting advancement of said free end..., ...adapted to grasp...) they do not impose any structural limitations on the claims distinguishable over the surgical cable system of Golds

et al as modified by Cohen, which is capable of being used as claimed if one so desires to do so. *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore, the law of anticipation does not require that the reference "teach" what the subject patent teaches, but rather it is only necessary that the claims under attack "read on" something in the reference. Kalman v. Kimberly Clark Corp., 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Response to Arguments

Applicant's arguments filed 01/22/2007 have been fully considered but they are not persuasive.

With regards to Applicant's argument that there is no provisional clamp disclosed in the Golds reference, the Examiner agrees. However, the above rejection under 35 USC 103 addresses this. Since only one clamp is presented in the Golds et al. reference, the Examiner explains that it would have been obvious to have duplicated another clamp for the invention. One clamp can be labeled "a permanent clamp" and one clamp can be labeled a "provisional clamp".

With regards to Applicant's argument that Golds et al. does not disclose a mechanism that can be utilized to release the strap used to hold the tissue together, the Examiner respectfully disagrees. The device of Golds et al. is disclosed as being used for " securing a strap about split portions of a sternum to

maintain the portions in adjacent contacting relationship during healing"(column 1, lines 9-12). Since the device is used "during healing" once the healing is completed, the device is then to be removed. It is well known in the art to remove cerclage type devices (as that of Golds et al.) once healing of the bone fragments has been completed. Therefore, there must be some mechanism for removing the device once healing of the bones has been completed.

With regards to Applicant's argument that the Golds et al. reference does not disclose a clamp that allows the cable to move in both directions prior to engagement of the stop, the Examiner respectfully disagrees. The clamp of Golds et al. allows the cable to move in both directions (column 2, lines 50-60). The clamp permits advancement of the cable in one direction (i.e. a tightening direction) and allows the cable to move in a loosening direction before the clamp engages the cable. As the cable moves in the loosening direction, it effects rotation of the clamp member, and the clamp member then secures the cable as it rotates in the loosening direction (column 2, lines 50-60).

With regards to Applicant's argument that Cohen does not disclose a multistrand cable nor any type of permanent clamp secured to the cable, the Examiner notes that these elements are disclosed by the Golds et al. reference (see above rejections). Cohen discloses a tensioning device that is used to tension cables, which as stated in the above rejection under 35 USC 103, would have been obvious to have combined with the clamp system of Golds et al. in order to tension the cable of the system of Golds et al. (Cohen, paragraph 0006, lines 9-10).

With regards to Applicant's arguments towards the use of a second clamp, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have constructed the surgical cable system of Golds et al. with two clamps, a provisional and a permanent, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Cumberledge whose telephone number

is (571) 272-2289. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLC

EDUARDO C. ROBERT
SUPERVISORY PATENT EXAMINER

FIG. 11

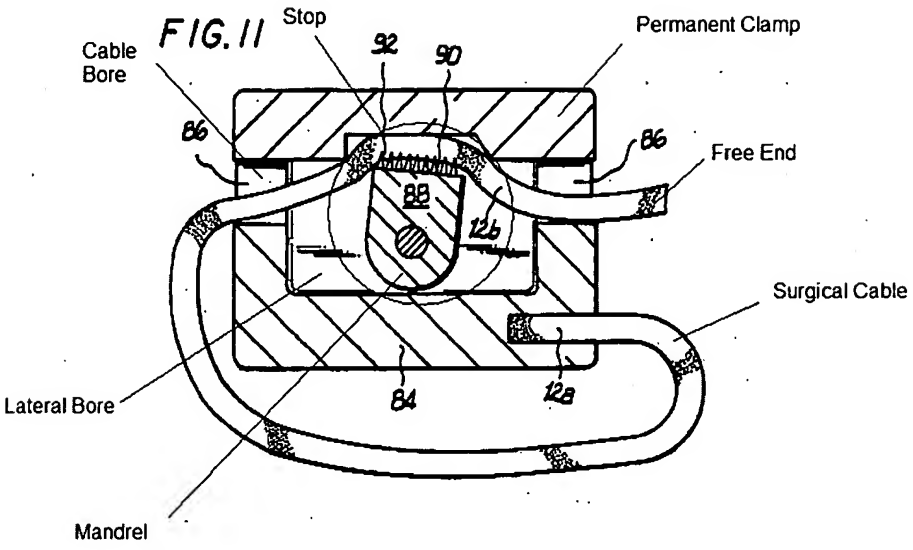
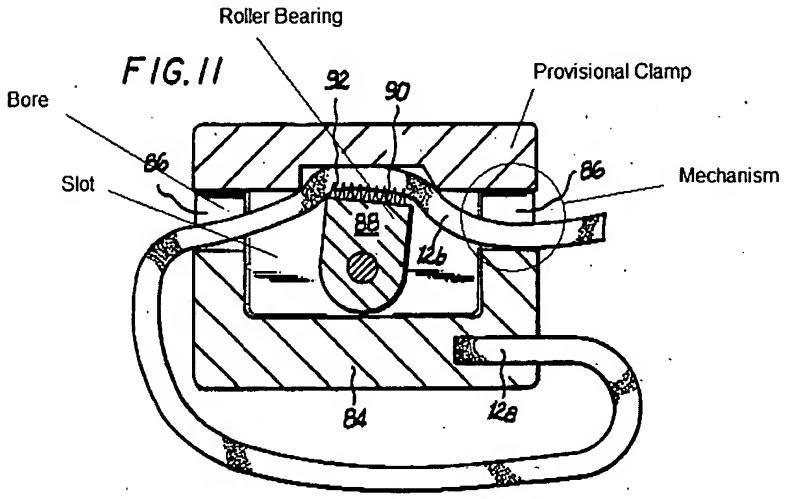

Stop
Permanent Clamp
Cable Bore
92
90
86
86
Free End
88
126
Surgical Cable
Lateral Bore
84
128
Mandrel

FIG. 11


Roller Bearing
Provisional Clamp
Bore
92
90
86
86
Slot
Mechanism
88
126
84
128

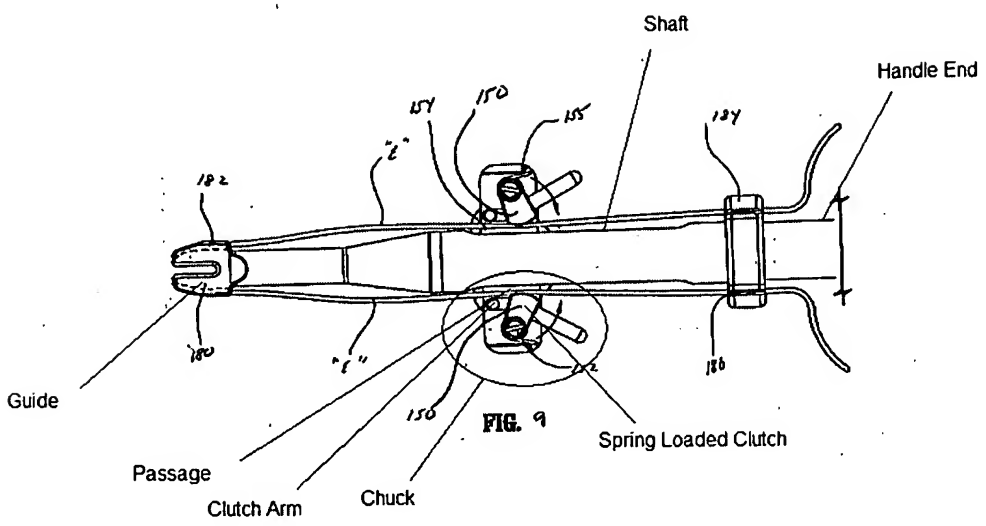

Shaft
Handle End
Guide
Passage
Clutch Arm
Chuck
Spring Loaded Clutch

FIG. 9

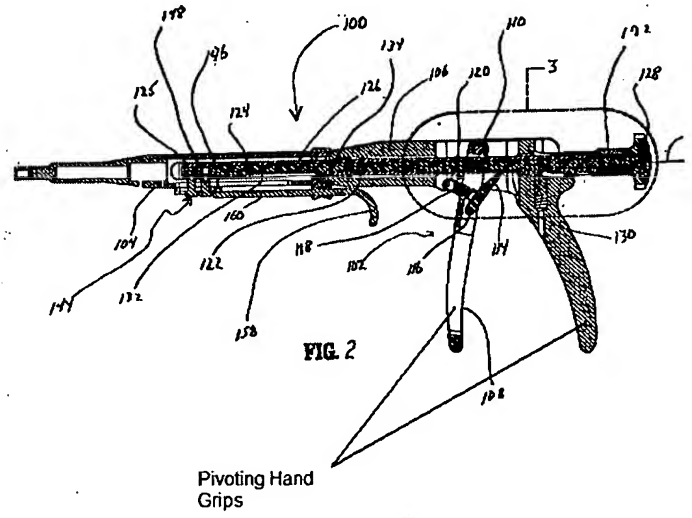

Pivoting Hand
Grips

FIG. 2